

WHAT IS CLAIMED IS:

1. A semiconductor stacking structure comprising:
  - a first semiconductor device; and

5 a flexible substrate coupled to a bottom surface of the first semiconductor device

wherein the flexible substrate is folded over on at least two sides to form flap portions which are coupled to an upper surface of the first semiconductor device and covers only a portion of the upper surface of the first semiconductor device.

2. A semiconductor stacking structure in accordance with Claim 1 further comprising an adhesive layer which is placed on the flap portions of the flexible substrate and which couples the flap portions to the first semiconductor device.

15 3. A semiconductor package in accordance with Claim 1 further comprising an adhesive layer which is placed on the upper surface of the first semiconductor device and which couples the flap portions to the first semiconductor device.

4. A semiconductor stacking structure in accordance with Claim 1 further comprising a second semiconductor device coupled to the flap portions of the flexible substrate.

5. A semiconductor stacking structure in accordance with Claim 4 wherein the second semiconductor device is coupled to the flap portions of the flexible substrate after the flap portions are folded over and coupled to the first semiconductor device.

6. A semiconductor stacking structure in accordance with Claim 4 wherein the second semiconductor device is coupled to the flap portions of the flexible substrate before the flap portions are folded over and coupled to the first semiconductor device.

7. A semiconductor stacking structure package in accordance with Claim 1 wherein the semiconductor stacking structure is a LGA (Land Grid Array) device.

8. A semiconductor stacking structure in accordance with Claim 1 wherein the semiconductor stacking structure is a BGA (Ball Grid Array) device.

9. A semiconductor stacking structure in accordance with Claim 1 wherein the semiconductor stacking structure is a lead type of device.

10. A semiconductor stacking structure in accordance with Claim 1 wherein the flexible substrate is folded over on four sides to form flap portions which are coupled to the upper surface of the first semiconductor device and covers only a portion of the upper surface of the first semiconductor device.

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11. A semiconductor stacking structure comprising:

a first semiconductor device; and

means coupled to a bottom surface of the first semiconductor device for forming

the semiconductor stacking structure wherein the means is folded over on at least two sides and coupled to an upper surface of the first semiconductor device and covers only a portion of the upper surface of the first semiconductor device.

12. A semiconductor stacking structure in accordance with Claim 11 further

comprising an adhesive layer placed on the means for coupling the means to the upper surface of the first semiconductor device.

13. A method of forming a semiconductor structure comprising:  
providing a flexible substrate;  
forming a first semiconductor device on the flexible substrate;  
folding over on at least two sides the flexible substrate; and  
coupling to an upper surface of the first semiconductor device the flexible  
5 substrate which is folded to form flap portions wherein the flap portions of the flexible substrate  
will cover only a portion of the upper surface of the first semiconductor device.

14. The method of Claim 13 further comprising applying an adhesive layer on  
the flap portions of the flexible substrate for coupling the flap portions of the flexible substrate to  
the first semiconductor device.

15. The method of Claim 13 further comprising applying an adhesive layer to  
the upper surface of the semiconductor device for coupling the flap portions of the flexible  
substrate to the first semiconductor device.  
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16. The method of Claim 13 further comprising:  
providing a second semiconductor device; and  
coupling the second semiconductor device to the flap portions of the flexible  
20 substrate after the flap portions are coupled to the upper surface of the first semiconductor  
device.

17. The method of Claim 13 further comprising:  
providing a second semiconductor device; and  
coupling the semiconductor device to the flap portions of the flexible substrate  
before the flap portions are coupled to the upper surface of the first semiconductor device.

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18. The method of Claim 13 further comprising forming contacts on the flexible  
substrate.

19. The method of Claim 13 wherein folding over on at least two sides the  
flexible substrate further comprises folding over the flexible substrate on four sides.

20. The method of Claim 19 further comprising the cutting adjoining flap  
portions to narrow a size of the adjoining flap portions so the flap portions will not overlap or  
contact each other.